

*Contemporary Challenges and Opportunities
in Foreign Language Teaching:
Integrating Artificial Intelligence
into Educational Practices*

Conference proceedings

May 21, 2026



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Сучасні виклики та можливості у викладанні іноземних мов: інтеграція штучного інтелекту в освітні практики: Матеріали Міжнародної науково-практичної онлайн-конференції, 21 травня 2026 р. – К., 2026. – 138 с.

Збірник містить матеріали науково-практичної конференції з актуальних питань й інноваційних тенденцій викладання іноземних мов у вищих навчальних закладах. Матеріали конференції можуть бути цікавими та корисними для науковців, аспірантів і викладачів.

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The collection contains proceedings of the international scientific and practical conference on the topical issues of modern approaches and innovative tendencies in foreign languages teaching in higher education institutions. The conference proceedings can be interesting and useful for scientists, postgraduates, and lecturers.

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INTEGRATION OF AI-BASED WRITING ASSISTANTS INTO ESP COURSE

Keywords: AI-based writing assistants, English language teaching (ELT), ESP, writing skills.

Introduction. The growing role of artificial intelligence technologies has significantly transformed contemporary educational process, particularly in the field of language learning. AI-based tools are now widely used in English language teaching (ELT) to develop writing skills, provide automated feedback, and enhance students' autonomy. These technologies play an increasingly important role due to the growing demand for professionally oriented foreign language communication skills in academic and professional contexts (Ginting et al., 2025).

Academic and technical writing skills are crucial for future specialists in applied mechanics at technical universities. These are reports, engineering documentation, research abstracts, and projects in English. However, observations show that students frequently encounter difficulties in grammatical accuracy, appropriate use of technical vocabulary, and logical structuring of complex ideas.

Traditional ESP teaching is effective in acquiring foundational knowledge but often lacks the capacity to deliver individualised, real-time feedback to large groups of students. As a result, students may experience limited opportunities for iterative improvement. In this context, AI-based writing assistants – such as grammar correction systems, predictive text tools, and generative language models – offer new pedagogical possibilities. These tools provide immediate feedback, support self-correction, and enable continuous revision processes.

Recent studies confirm the growing effectiveness of AI tools in improving writing skills in ESP teaching. For instance, AI-based systems have been shown to enhance grammatical accuracy and coherence while also increasing students' engagement (Torres & Kahveci, 2025; Jmaiel et al., 2025). However, concerns remain regarding the potential reduction of critical thinking and excessive dependence on automated corrections (Sharmithashini & Hashim, 2025).

Objectives. The purpose of the article is to examine the impact of AI-based writing tools on the development of writing skills among future specialists in applied mechanics.

Methods. The study involved 32 third-year students specialising in applied mechanics at Igor Sikorsky Kyiv Polytechnic Institute. Participants were divided into two equivalent groups: experimental group (16 students): AI-assisted teaching; control group (16 students): traditional ESP teaching.

Both groups followed the same syllabus and completed identical writing tasks.

The experimental group used AI-based writing assistants throughout the part of the course. These included grammar correction systems and generative AI tools

capable of suggesting improvements in structure, vocabulary, and coherence. Students were encouraged to use these tools during drafting and revision stages.

The control group followed traditional instruction, relying exclusively on teacher feedback, peer review, and printed reference materials. Feedback was provided manually by the teacher after task completion.

Data were collected using multiple instruments:

- pre-test and post-test writing tasks (technical essays and reports);
- analytical rubric assessing: grammatical accuracy; lexical precision; coherence and cohesion; use of technical terminology;
- student questionnaires measuring attitudes towards AI tools;
- semi-structured interviews exploring students' experiences in depth.

Results. The results indicate that the experimental group achieved notably stronger progress across all assessed dimensions in comparison with the control group. Improvements were particularly evident in grammatical accuracy, lexical precision, and coherence, while the use of technical vocabulary in structured engineering writing also became more consistent and appropriate. Overall, the performance gains in the experimental group were substantially higher, suggesting that the instructional approach had a measurable positive impact on writing quality.

These outcomes are consistent with recent empirical research demonstrating the effectiveness of AI-supported writing tools in enhancing language learning, especially in tasks that require sustained written production (Jmaiel et al., 2025). In this context, the use of AI appears to function not only as a corrective mechanism but also as a developmental support that facilitates iterative learning.

Student feedback further supports this interpretation. Participants frequently noted the value of immediate and continuous feedback during writing tasks, which allowed them to identify and correct errors in real time. Many students also reported increased confidence in independent writing and greater efficiency in completing assignments. Another commonly mentioned benefit was an increased awareness of linguistic patterns, which contributed to more conscious language use. Importantly, students appreciated the opportunity to revise their texts multiple times without waiting for teacher's input, which encouraged a more active and self-directed engagement with the writing process.

At the same time, several limitations were identified. Some students demonstrated a tendency to rely excessively on automated correction systems, which in certain cases reduced their engagement with underlying grammatical rules. There were also instances of uncertainty regarding the reliability of AI-generated suggestions, particularly when the feedback appeared inconsistent or insufficiently explained. In addition, not all participants consistently applied critical evaluation when accepting proposed changes, which may affect the depth of learning.

These findings suggest that while AI tools can significantly enhance writing development and students autonomy, their use should be accompanied by teacher's guidance. The most effective implementation appears to involve a balanced approach, where AI serves as a supportive instrument for practice and revision, while critical thinking and teacher's input remain essential components of the learning process.

These concerns correspond with findings in recent studies highlighting the risk of dependency and reduced analytical thinking when AI tools are used without pedagogical guidance (Sharmithashini & Hashim, 2025; Li & Wilson, 2025).

Discussion. The results of this study confirm that AI-based writing assistants significantly enhance ESP writing teaching in technical education contexts. The observed improvements in grammatical accuracy, lexical precision, and coherence suggest that AI tools function effectively as scaffolding mechanisms in the writing process.

From a pedagogical perspective, AI tools facilitate active engagement, iterative learning, and feedback-driven improvement by enabling students to identify and correct errors independently, thereby promoting learner autonomy and self-regulated learning (Li & Wilson, 2025).

At the same time, the study highlights important limitations. Excessive reliance on AI feedback may reduce students' engagement with underlying linguistic rules, potentially weakening long-term language competence. This confirms concerns raised in recent literature regarding the need for balanced AI integration in education (Sharmithashim & Hashim, 2025).

Furthermore, ethical considerations must be addressed, including transparency of AI use, data privacy, and academic integrity. As noted in recent research, responsible implementation is essential to ensure sustainable educational outcomes (Jeon, 2025).

Conclusion. This study demonstrates that AI-based writing assistants significantly improve ESP writing skills among future specialists in applied mechanics. The integration of AI contributes to enhanced grammatical accuracy, improved lexical precision, and greater learner autonomy.

However, the effectiveness of AI depends on its pedagogically informed integration. Without proper plan, there is a risk of over-reliance and reduced critical engagement. Therefore, teachers remain essential in guiding students' learning processes and ensuring the development of deep linguistic competence.

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